

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
14 June 2001 (14.06.2001)

PCT

(10) International Publication Number  
**WO 01/42285 A3**

(51) International Patent Classification<sup>7</sup>: C07K 14/47,  
14/705, 14/78, C12N 15/12, C07K 16/18, G01N 33/50,  
A61K 38/16

M. [US/US]; 233 Coy Drive, San Jose, CA 95123 (US).  
SHAH, Purvi [IN/US]; 859 Salt Lake Drive, San Jose, CA  
95133 (US). AU-YOUNG, Janice [US/US]; 233 Golden  
Eagle Lane, Brisbane, CA 94005 (US).

(21) International Application Number: PCT/US00/32990

(74) Agents: HAMLET-COX, Diana et al.; Incyte Genomics,  
Inc., 3160 Porter Drive, Palo Alto, CA 94304 (US).

(22) International Filing Date: 5 December 2000 (05.12.2000)

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,  
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,  
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(26) Publication Language: English

(30) Priority Data:  
60/172,852 10 December 1999 (10.12.1999) US  
60/172,354 16 December 1999 (16.12.1999) US

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): INCYTE  
GENOMICS, INC. [US/US]; 3160 Porter Drive, Palo  
Alto, CA 94304 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): YUE, Henry  
[US/US]; 826 Lois Avenue, Sunnyvale, CA 94087 (US).  
TANG, Y., Tom [CN/US]; 4230 Ranwick Court, San  
Jose, CA 95118 (US). LAL, Preeti [IN/US]; 2382 Lass  
Drive, Santa Clara, CA 95054 (US). BURFORD, Neil  
[GB/US]; 105 Wildwood Circle, Durham, CT 06422 (US).  
AZIMZAI, Yalda [US/US]; 5518 Boulder Canyon Drive,  
Castro Valley, CA 94552 (US). PATTERSON, Chandra  
[US/US]; 490 Sherwood Way, #1, Menlo Park, CA 94025  
(US). BAUGHN, Mariah, R. [US/US]; 14244 Santiago  
Road, San Leandro, CA 94577 (US). LU, Dyung, Aina,

Published:

— with international search report

(88) Date of publication of the international search report:  
7 March 2002

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*



WO 01/42285 A3

(54) Title: EXTRACELLULAR MATRIX AND CELL ADHESION PROTEINS AS WELL AS GENES ENCODING THEM

(57) Abstract: The invention provides human extracellular matrix and cell adhesion molecules (XMAD) and polynucleotides which identify and encode XMAD. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with expression of XMAD.

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 00/32990

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C07K14/47 C07K14/705 C07K14/78 C12N15/12 C07K16/18  
G01N33/50 A61K38/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal, EMBL, STRAND, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL [Online] European Molecular Biology Organisation; Acc. No. HSAA75, HILLIER ET AL.: "z180d02.s1 Stratagene colon (#937204) Homo sapiens cDNA clone IMAGE:510915 3', mRNA sequence" XP002165218 the whole document</p> <p>---</p> <p>-/--</p>	<p>3,6-8, 11-14</p>

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "Z" document member of the same patent family

Date of the actual completion of the international search

16 May 2001

Date of mailing of the international search report

17.08.01

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 551 epo nl.  
Fax: (+31-70) 340-3016

Authorized officer

Steffen, P

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/32990

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>DATABASE EMBL [Online]  European Molecular Biology Organisation;  Acc. No. AF238255,  12 April 2000 (2000-04-12)  LIU ETAL.: "Homo sapiens mixed lineage  kinase mRNA, complete cds."  XP002165219  See also related EMBL Database entries  AF251441; AB030034; AB049733 for genes  encoding the same protein  the whole document  -&amp; LIU ET AL.: "Cloning and expression of  ZAK, a mixed-lineage kinase-like protein  containing a leucine-zipper and a  sterile-alpha motif."  BIOCHEMICAL AND BIOPHYSICAL RESEARCH  COMMUNICATIONS,  vol. 274, 11 August 2000 (2000-08-11),  pages 811-816, XP002167497  the whole document  -&amp; DATABASE EMBL [Online]  European Molecular Biology Organisation;  Acc. No. AF251441,  27 April 2000 (2000-04-27)  MCNEE ET AL.: "Cloning and  Characterization of AZK, a mixed-lineage  kinase containing a sterile-alpha motif"  XP002167498  the whole document  -&amp; DATABASE EMBL [Online]  European Molecular Biology Organisation;  Acc. No. AB030034,  25 August 2000 (2000-08-25)  ABE AND UEDA: "Placible mixed lineage  kinase derived from LAK cell"  XP002167499  the whole document  -&amp; DATABASE EMBL [Online]  European Molecular Biology Organisation;  Acc. No. AB049733,  13 October 2000 (2000-10-13)  GOTHO ET AL.: "Identification and  Characterization of a Novel MAP Kinase  Kinase Kinase, MLTK"  XP002167500  the whole document</p>	<p>1-19,22,  25-28</p>
E	<p>WO 00 73469 A (PLOWMAN GREGORY D ;SUGEN  INC (US); WHYTE DAVID (US); MARTINEZ RICA)  7 December 2000 (2000-12-07)  SEQ ID NO's 201 &amp; 82 (AA232253 H) and  description page 116, lines 6-20  page 74 -page 130; figures 1T,2MMM,2NNN  ---</p>	<p>1-19,22,  25-28</p>

-/--

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/32990

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim No.
Category	Citation of document, with indication, where appropriate, of the relevant passages	
A	WO 99 63088 A (BAKER KEVIN ;CHEN JIAN (US); GENENTECH INC (US); YUAN JEAN (US); G) 9 December 1999 (1999-12-09) the whole document	
A	--- DATABASE EMBL [Online] European Molecular Biology Organisation; Acc. No. AF193795, 2 November 1999 (1999-11-02) EDGAR AJ AND POLACK JM: "Homo sapiens vacuolar sorting protein VPS29/PEP11 mRNA, complete cds." XP002165220 the whole document -----	

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 00/32990

## B x I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:

1-19,22,25-28 all partly

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 1 and the corresponding polynucleotide of SEQ ID NO: 22.

2. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 2 and the corresponding polynucleotide of SEQ ID NO: 23.

3. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 3 and the corresponding polynucleotide of SEQ ID NO: 24.

4. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 4 and the corresponding polynucleotide of SEQ ID NO: 25.

5. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 5 and the corresponding polynucleotide of SEQ ID NO: 26.

6. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 6 and the corresponding polynucleotide of SEQ ID NO: 27.

7. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 7 and the corresponding polynucleotide of SEQ ID NO: 28.

8. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

restricted to a polypeptide of SEQ ID NO: 8 and the corresponding polynucleotide of SEQ ID NO: 29.

9. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 9 and the corresponding polynucleotide of SEQ ID NO: 30.

10. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 10 and the corresponding polynucleotide of SEQ ID NO: 31.

11. Claims: 1-19,22,25-28 (all partly)i

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 11 and the corresponding polynucleotide of SEQ ID NO: 32.

12. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 12 and the corresponding polynucleotide of SEQ ID NO: 33.

13. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 13 and the corresponding polynucleotide of SEQ ID NO: 34.

14. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 14 and the corresponding polynucleotide of SEQ ID NO: 35.

15. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 15 and the corresponding polynucleotide of SEQ ID NO: 36.

16. Claims: 1-19,22,25-28 (all partly)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 16 and the corresponding polynucleotide of SEQ ID NO: 37.

17. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 17 and the corresponding polynucleotide of SEQ ID NO: 38.

18. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 18 and the corresponding polynucleotide of SEQ ID NO: 39.

19. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 19 and the corresponding polynucleotide of SEQ ID NO: 40.

20. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 20 and the corresponding polynucleotide of SEQ ID NO: 41.

21. Claims: 1-19,22,25-28 (all partly)

Polypeptides, polynucleotides, methods and compositions restricted to a polypeptide of SEQ ID NO: 21 and the corresponding polynucleotide of SEQ ID NO: 42.



# INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/US 00/32990

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0073469 A	07-12-2000	AU 5173400 A	18-12-2000
WO 9963088 A	09-12-1999	AU 4328699 A	20-12-1999
		AU 2212299 A	26-07-1999
		WO 9935170 A	15-07-1999

